Amendments to the Specification:

Please amend paragraph 129 as follows:

[129] Step 4: cDNA synthesis and in vitro transcription: Double stranded, labeled, cDNA is synthesized from the purified mRNA samples using the Invitrogen Life Technologies Superscript® Choice system (Invitrogen Inc., Carlsbad, Ca.). mRNA samples from cells cultured under conditions not conducive to the generation of hydrogen and from cells cultured under conditions more conducive to the generation of hydrogen are processed simultaneously. ~~4 μg of mRNA from each sample are put into RNAse-free microcentrifuge tubes, along with 100 pmol HPLC-purified primer of the sequence~~

~~5'-GGCCAGTGAATTGTAATACGACTCACTATAGGGAGGCGG-$(dT)_{24}$-3'.~~ The tube is incubated at 70°C for 10 minutes, briefly centrifuged, and placed on ice for 5 minutes. The following reagents are added: (1) 1 μL 10 mM dNTP mix; (2) 2 μL 100 mM DTT; (3) 4 μL 5X first strand cDNA buffer (proprietary composition, available from Invitrogen Inc, Carlsbad, Ca.). The reaction is then incubated at 37°C for 2 minutes. 4 μL of 200U/μL SuperScript® II reverse transcriptase is added to the reaction to make a final volume of 20 μL. The reaction is then incubated at 37°C for 1 hour. The reaction is then placed on ice and the following regents are added and mixed: 91 μL of DEPC-treated water, 30 μL of 5X second strand reaction buffer (proprietary composition, available from Invitrogen Inc, Carsbad, Ca.), 3 μL of 10 mM dNTP mix, 1 μL of 10 U/μL E. coli DNA ligase, 4 μL of 10 U/μL E. coli DNA polymerase I, and 1 μL of 2 U/μL E. coli Rnase H. The reaction is incubated at 16°C for 2 hours. 2 μL of 5U/μL T4 DNA Polymerase is added to the reaction and it is incubated for 5 minutes at 16°C. 10 μL 0.5M EDTA is added to the reaction.

Please delete Table 1, pages 54-56.

Please delete paragraph 172, page 56.

Please delete Table 2, pages 56-64.

Please delete Table 3, page 65.

Please delete Table 4, pages 65-66.